

Example #2: A copper bar 30 cm long is perpendicular to a field of strength 0.80 T and moves at right angles to the field with a speed of 50 cm/s. Determine the EMF induced in the bar.

$$L = 0.30 \text{ m}$$

$$B = 0.80 \text{ T}$$

$$v = 0.50 \text{ m/s}$$

$$\mathcal{E} = vBl$$

$$= (.50)(.80)(.30)$$

$$\boxed{\mathcal{E} = 0.12 \text{ V}}$$